## STUDIES IN THE EUPATORIEAE (ASTERACEAE). CLXIV.

## VARIOUS NOTES AND ADDITIONS

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Continuing studies in the Eupatorieae have shown the need for additional new combinations in a number of genera. A few of those included below are required for the projected study of the tribe in northern Central America while others are needed to complete anotations on borrowed material.

Ageratina latipes (Benth.) R.M.King & H.Robinson, comb.

nov. Eupatorium latipes Benth., Pl. Hartw. 200.
1845. Colombia. This species with distinctive oblong leaves has been considered a synonym of the Ecuadorian A. viscosa (H.B.K.) K. & R. Photographs of typical A. viscosa show a plant the same as or closely related to A. dendroides (Spreng.) K. & R.

Ageratina miquihuana (B.L.Turner) R.M.King & H.Robinson, comb. nov. Eupatorium miquihuanum B.L.Turner, Wrightia 5(9):352. 1977. Mexico. An isotype of this Mexican species in the United States National Herbarium shows the species to be an unusual member of the genus Ageratina with unequal involucral bracts more like those in some South American species. Eupatorium astillerum B.L.Turner from northern Mexico is a minor variant of the species. A specimen (Pennell 17372, Coahuila, Sierra Guadalupe, US) shows a number of intermediate features.

Ageratina proba (N.E.Brown) R.M.King & H.Robinson, comb.

nov. Eupatorium probum N.E.Brown, Gard. Chron. 1:
321. 1890. Peru.

Ageratina subpenninervia (Klatt) R.M.King & H.Robinson, comb. nov. Eupatorium subpenninervium Schultz-Bip. ex Klatt, Leopoldina 20:89. 1884. This is the same species recently redescribed as Eupatorium monticola L.O.Williams. B.L.Robinson (1926) included in the synonmy Eupatorium subinclusum Klatt which was published in the same article as E. subpenninervium but did not notice that the installment had a month priority. A fragment of E. subinclusum has been seen and while not identified with certainty, it is definitely not the same as E. subpenninervium.

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Ageratum rugosum Coulter, Bot. Gaz. 20:42. 1895.

Alomia wendlandii B.L.Robinson; Proc. Amer. Acad. 49:452. 1913.

Alomia robinsonianum L.O.Williams, Fieldiana; Bot. 31:27. 1964. nom. nov. for A. wendlandi B.L.R. Ageratum robinsonianum (L.O.Williams) L.O.Williams, Fieldiana: Bot. 36:81. 1975.

The application of the name wendlandii has been the subject of much confusion. The name was coined by Schultz-Bipontinus but not published. Klatt (1884) mentioned the Schultz-Bip. name in synonymy with the citation of a collection Liebmann 147 from Mexico. Vilmorin (1894) described subspecific variants of the species in polynomial form. These invalid uses of the name were all for material now recognized as the common Ageratum houstonianum Miller. As evident from the herbarium sheet of <u>Liebmann</u> 147 at Paris, the material under the number is mixed. The valid publication of Ageratum wendlandii by B.L.Robinson (1913) was based on a Copenhagen duplicate that is an entirely different species from A. houstonianum. The misinterpretation of the Schultz-Bipontinus concept by B.L.Robinson led Williams (1964) to erroneously believe that the Robinson name was invalid. In fact, the Robinson name would now require transfer into the genus Ageratum if the species were not obviously the same as the previously named Ageratum rugosum which usually has the pappus reduced or essentially lacking.

Austrocritonia taunayana (Glaziou ex B.L.Robinson) R.M.

King & H.Robinson, comb. nov. Eupatorium taunayanum
Glaziou ex B.L.Robinson, Contr. Gray Herb. n.s. 73:8.
1924. This is the fourth species recognized in this
distinctive genus of southern Brazil. The characteristic
pappus setae are present having strongly scabrous bases
tapering into essentially smooth tips. The species is
distinguished from others in the genus by the trinervate leaves with closely serrate margins, thus increasing the already considerable diversity of leaf form
found in this small genus.

The species has a resemblance to the genus, Symphyopappus but can be distinguished by the depressed and hirtellous upper side of the midvein of the leaf, the lack of ridges on the branches of the inflorescence, the essentially smooth tips of the pappus setae and the large carpopodium. The midvein of the leaf is raised and essentially glabrous above in Symphyopappus, and the carpopodium is very small, being somewhat enlarged only in S. itatiayensis (Hieron.) K. & R.

Campuloclinium parvulum (Glaziou ex B.L.Robinson) R.M.

King & H.Robinson, comb. nov. Eupatorium parvulum
Glaziou ex B.L.Robinson, Contr. Gray Herb. n.s. 73:16.
1924. The previous combination of this species (King & Robinson, 1972 Phytologia 24(3):170. 1972) was invalid since it was based on the invalid listing of Glaziou. The name was properly validated in the B.L.Robinson reference.

Chromolaena mucronata (Gardn.) R.M.King & H.Robinson, comb. nov. Eupatorium mucronatum Gardn. Hook. Lond. Journ. Bot. 6:440, 1847. Brazil. In its typical form the species has serrate leaves, but we consider Eupatorium subserratum Gardn. having nearly entire leaves to be a synonym.

Chromolaena quercetorum (L.O.Williams) R.M.King & H.RobInson, comb. nov. Eupatorium quercetorum L.O.
Williams, Fieldiana:Botany 36(10):101. 1975. Guatemala.
The species is closely related to C. glaberrima and specimens have been seen in the U. S. National Herbarium under the latter name including Williams, Molina, & Williams 41242 from Huehuetenango, Guatemala and BreedLove 13893, 14108; Breedlove & Raven 13394; Cronquist & Sousa 10502 and Matuda 0737 from Chiapas, Mexico.

Critonia magistri (L.O.Williams) R.M.King & H.Robinson, comb. nov. Eupatorium magistri L.O.Williams, Fieldiana: Botany 36(10):90. 1975. The species is what has been called Critonia billbergiana (Beurl.) K. & R. in Guatemala and adjacent Belize. The latter species from Panama and Costa Rica seems to differ slightly by shorter heads and nearly or completely glabrous achenes.

Disynaphia halimifolia (A.P.Decandolle) R.M.King & H. Robinson, comb. nov. Eupatorium halimifolium A.P. Decandolle, Prodr. 5:150. 1836. The species was not recognized in our initial survey of the genus (King & Robinson, 1971b). Baker (1876) identified the central Brazilian species with D. spathulata(Hook. & Arn.) K. & R. The latter, contrary to Baker's treatment had priority and differs by the much broader obovate leaves. Material of D. halimifolia has usually been identified as D. ligulaefolia (Hook. & Arn.)K. & R. of southern Brazil but that species lacks the canescent tomentum of D. halimifolia and has thinner, more densely glanduilferous, more prominently keeled involucral bracts that are not as intensely darkened on the inner surface. Two other species of southern Brazil, D. variolata

(B.L.Robinson) K. & R. and  $\underline{D}$ . littoralis (Cabrera) K. & R. have pubescence as in  $\underline{D}$ . halimifolia but have much shorter primary leaves indistinct from the fascicles and have much smaller heads with thinner bracts.

Gyptis crassipes (Hieron.)R.M.King & H.Robinson, comb.

Nov. Eupatorium crassipes Hieron., Bot. Jahrb. 22:
780. 1897. In the preliminery study of the genus Gyptis (King & Robinson, 1971a) the species was treated under the name G. alternifolia. B.L.Robinson (1933) in his discussion of the genus pointed out that Eupatorium alternifolium Schultz-Bip. ex Baker was a later homonym. Both Hassler (1916) and B.L.Robinson (1933) treated the species as part of a broad concept with Eupatorium lanigerum Hook. & Arn. We continue to define the species more narrowly and the oldest name for G. alternifolius at the species level now proves to be E. crassipes Hier.

Koanophyllon correlliorum (Plettman) R.M.King & H.Robinson, comb. nov. Eupatorium correlliorum Plettman, Brittonia 29:85. 1977. The holotype is cited as NY by Plettman (1977) but the Botanical Garden has no record of having received the material. Dr. D.S.Correll of the Fairchild Gardens has kindly furnished an isotype and paratype for examination.

Praxelis chiquitensis (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Eupatorium chiquitense B.L.Robinson, Contr. Gray Herb. n.s. 68:11. 1923. The species is from Bolivia: Santa Cruz: Prov. Chiquitos, Cerro Pesenema near Santiago de Chiquitos, alt. 800 m Herzog 25. Only a fragment and a photograph from the Gray Herbarium have been seen, but the generic characters are easily recognized. The species is the only linear-leaved member of the genus in Bolivia and differs from such Brazilian species as P. insigne by the fewer series of more pointed involucral bracts.

Raulinoreitzia leptphlebia (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Symphyopappus leptophlebius B.L.Robinson, Contr. Gray Herb. n.s. 96:18. 1931. B.L. Robinson (1931) mentioned the resemblance of this species to E. crenulatum Spreng. which is a Raulinoreitzia. Type fragments seen through the courtesy of the Gray Herbarium show that the species is closely related and should be transfered to the latter genus. The species differs by the broadly lanceolate slender-tipped leaves. The type was from Minas Gerias in Brazil and additional specimens fitting the description have been seen. Brasil: Goias: ca. 20 km N of Alto do Paraiso; Irwin, Harley & Smith 32214, Santa Catarina: Mun. Joacaba, Campo 3 km E of Ponte Serrada; L.B.Smith & R.Klein

11874; Parana: Mun. Rio Bco do Sul, Curiola; G.Hatschbach 16126 (all US). The scattered incidence of the species and the intermediate nature of the leaf shape suggests that the species might be a reoccurring hybrid between the two other widely distributed members of the genus, R. crenulata (Spreng.)K & R and R. tremula (Hook. & Arn.) K & R.

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## Acknowledgement

This study was supported in part by the National Science Foundation Grant DEB77-13457 to the senior author.